

CLAIM AMENDMENTS

Please replace all prior versions of the claims with the following listing of the revised claims.

In The Claims:

1. (previously amended) A stent-graft assembly, comprising:

at least one unitary stent structure comprising a luminal surface and an abluminal surface and having at least a first radial opening and a second radial opening, said first and second radial openings being axially and circumferentially defined by a plurality of struts, said first and second radial openings extending through said stent structure between said luminal surface and said abluminal surface, wherein said first and second radial openings are spaced apart along a first direction;

a first graft layer disposed along at least a portion of said luminal surface of said stent structure thereby fully covering luminal sides of said first and second radial openings;

a second graft layer disposed along at least a portion of said abluminal surface of said stent structure thereby fully covering abluminal sides of said first and second radial openings;

a first attached area securing said first graft layer and said second graft layer together through a portion of said first radial opening, wherein a first unattached margin in which said first and second graft layers are not secured to each other is disposed between said first attached area and an edge of said first radial opening;

a second attached area securing said first graft layer and said second graft layer together through a portion of said second radial opening, wherein a second unattached margin in which said first and second graft layers are not secured to each other is disposed between said second attached area and an edge of said second radial opening; and

wherein said first and second unattached margins are oriented along said first direction and on a same side of said first and second attached areas, thereby allowing said first and second graft layers to move along said first direction relative to said stent.

2. (original) The stent-graft assembly according to claim 1, wherein a size of said first attached area is less than a size of said first unattached margin and a size of said second attached area is less than a size of said second unattached margin.

3. (original) The stent-graft assembly according to claim 1, wherein said first direction is axial.

4. (original) The stent-graft assembly according to claim 1, wherein said first direction is circumferential.

5. (previously amended) The stent-graft assembly according to claim 1, wherein said first attached area is positioned adjacent another edge of said first radial opening and said second attached area is positioned adjacent another edge of said second radial opening, said first and second attached areas thereby being disposed on opposite sides of said struts, whereby said first and second graft layers are restricted from moving along a second direction relative to said stent.

6. (original) The stent-graft assembly according to claim 5, wherein said first direction is axial and said second direction is circumferential.

7. (previously amended) The stent-graft assembly according to claim 1, wherein said first unattached margin extends peripherally all around said first attached area and said second unattached margin extends peripherally all around said second attached area.

8. (original) The stent-graft assembly according to claim 7, wherein a size of said first attached area is less than a size of said first unattached margin and a size of said second attached area is less than a size of said second unattached margin.

9. (original) The stent-graft assembly according to claim 1, wherein:
a third unattached margin whereby said first and second graft layers are not secured to each other is disposed between said first attached area and an edge of said first radial opening;

a fourth unattached margin whereby said first and second graft layers are not secured to each other is disposed between said second attached area and an edge of said second radial opening; and

said third and fourth unattached margins are oriented along a second direction, thereby allowing said first and second graft layers to move along said second direction relative to said stent, said second direction being different than said first direction.

10. (original) The stent-graft assembly according to claim 9, wherein a size of said first attached area is less than a size of said third unattached margin and a size of said second attached area is less than a size of said fourth unattached margin.

11. (original) The stent-graft assembly according to claim 1, wherein said first graft layer covers substantially all of said luminal surface of said stent structure and said second graft layer covers substantially all of said abluminal surface of said stent structure.

12. (original) The stent-graft assembly according to claim 1, wherein said first and second attached areas are attached using sutures.

13. (original) The stent-graft assembly according to claim 1, wherein said first and second attached areas are attached by thermal bonding.

14. (original) The stent-graft assembly according to claim 1, wherein said first and second graft layers comprise a synthetic polymer.

15. (original) The stent-graft assembly according to claim 1, wherein first and second graft layers comprise small intestine submucosa.

16. (original) The stent-graft assembly according to claim 1, wherein said first and second attached areas are attached by thermal bonding; and said first and second graft layers comprise a synthetic polymer.

17. (original) The stent-graft assembly according to claim 16, wherein:
a third unattached margin whereby said first and second graft layers are not secured to each other is disposed between said first attached area and an edge of said first radial opening;

a fourth unattached margin whereby said first and second graft layers are not secured to each other is disposed between said second attached area and an edge of said second radial opening; and

said third and fourth unattached margins are oriented along a second direction, thereby allowing said first and second graft layers to move along said second direction relative to said stent, said second direction being different than said first direction.

18. (original) The stent-graft assembly according to claim 17, wherein a size of said first attached area is less than a size of said first unattached margin and a size of said third unattached margin and a size of said second attached area is less than a size of said second unattached margin and a size of said fourth unattached margin.

19. (original) The stent-graft assembly according to claim 18, wherein said first graft layer covers substantially all of said luminal surface of said stent structure and said second graft layer covers substantially all of said abluminal surface of said stent structure.

20. (original) The stent-graft assembly according to claim 17, wherein first and second graft layers comprise small intestine submucosa; and said first and second attached areas are attached using sutures.

21. (original) The stent-graft assembly according to claim 20, wherein:
a third unattached margin whereby said first and second graft layers are not secured to each other is disposed between said first attached area and an edge of said first radial opening;

a fourth unattached margin whereby said first and second graft layers are not secured to each other is disposed between said second attached area and an edge of said second radial opening; and

said third and fourth unattached margins are oriented along a second direction, thereby allowing said first and second graft layers to move along said second direction relative to said stent, said second direction being different than said first direction.

22. (original) The stent-graft assembly according to claim 21, wherein a size of said first attached area is less than a size of said first unattached margin and a size of said third unattached margin and a size of said second attached area is less than a size of said second unattached margin and a size of said fourth unattached margin.

23. (original) The stent-graft assembly according to claim 22, wherein said first graft layer covers substantially all of said luminal surface of said stent structure and said second graft layer covers substantially all of said abluminal surface of said stent structure.

24. (original) The stent-graft assembly according to claim 17, wherein first and second graft layers comprise small intestine submucosa; and said first and second attached areas are attached by thermal bonding.

25. (original) The stent-graft assembly according to claim 24, wherein:
a third unattached margin whereby said first and second graft layers are not secured to each other is disposed between said first attached area and an edge of said first radial opening;

a fourth unattached margin whereby said first and second graft layers are not secured to each other is disposed between said second attached area and an edge of said second radial opening; and

said third and fourth unattached margins are oriented along a second direction, thereby allowing said first and second graft layers to move along said second direction relative to said stent, said second direction being different than said first direction.

26. (original) The stent-graft assembly according to claim 25, wherein a size of said first attached area is less than a size of said first unattached margin and a size of said third unattached margin and a size of said second attached area is less than a size of said second unattached margin and a size of said fourth unattached margin.

27. (original) The stent-graft assembly according to claim 26, wherein said first graft layer covers substantially all of said luminal surface of said stent structure and said second graft layer covers substantially all of said abluminal surface of said stent structure.

28-35. (cancelled).

36. (previously added) A stent-graft assembly, comprising:

a stent structure comprising a luminal surface and an abluminal surface and having at least a first radial opening and a second radial opening, said first and second radial openings extending through said stent structure between said luminal surface and said abluminal surface, wherein said first and second radial openings are spaced apart along a first direction;

a first graft layer disposed along at least a portion of said luminal surface of said stent structure thereby fully covering luminal sides of said first and second radial openings;

a second graft layer disposed along at least a portion of said abluminal surface of said stent structure thereby fully covering abluminal sides of said first and second radial openings;

a first attached area securing said first graft layer and said second graft layer together through a portion of said first radial opening, wherein a first unattached margin in which said first and second graft layers are not secured to each other is disposed between said first attached area and an edge of said first radial opening;

a second attached area securing said first graft layer and said second graft layer together through a portion of said second radial opening, wherein a second unattached margin in which said first and second graft layers are not secured to each other is disposed between said second attached area and an edge of said second radial opening;

wherein said first and second unattached margins are oriented along said first direction and on a same side of said first and second attached areas, thereby allowing said first and second graft layers to move along said first direction relative to said stent; and

wherein said first unattached margin extends peripherally all around said first attached area and said second unattached margin extends peripherally all around said second attached area.